

COURSE LAYOUT AND SCORING METHOD FOR PLAYING A GAME ON THE COURSE LAYOUT

BACKGROUND OF THE INVENTION

[001] This invention relates generally to course layouts and design, and particularly to a method of laying out a course and playing a game thereon.

[002] Many recreational areas require a relatively large area of land. For example, a traditional 18-hole golf course typically requires a minimum of 150-200 or more acres of land. Larger land use requirements may also be necessary for traditional golf course complexes that include expanded clubhouses, practice facilities, additional 9- or 18-hole courses and those built as part of new housing developments. The design and construction of traditional golf courses is a relatively complex and expensive undertaking that can frequently take two years or more to complete. Such undertakings may incur delays and cost increases as a consequence of end user demands or unanticipated events associated with a construction site. Once completed, a traditional golf course requires ongoing maintenance, which may be relatively expensive due to the land use requirements. For example, customized courses usually require customized architecture and support systems such as water control, irrigation, wetland management and a high number of hazards and greater distances from green to tee, especially for those courses built to accommodate sprawling housing developments. These features, as well as others, may contribute to escalating maintenance costs that may inflate the cost of playing the course over time. Furthermore, traditional golf courses are only suited for playing the traditional game of golf, which deters many people from even taking up the game.

[003] The traditional game of golf has never recognized a well-defined entry-level development program suitable for any age group. As the popularity of golf has grown so have the number of age groups wanting to learn the game. Beginner golfers may range in age from preschool to retirement ages. Introducing these wide ranging age groups into the game has proved difficult due to the limited indoctrination options and potentially high costs of experimenting

with the game. Historically, a prospective player's initial exposure to learning how to swing a traditional golf club would be at a golf ball driving range where the beginner player may or may not take lessons from a golf professional. While a driving range provides a good forum for swinging a traditional golf club and hitting traditional golf balls it does not provide an opportunity for actually playing the game. Similarly, beginner players may enjoy practicing their putting at a putt-putt or miniature golf course. Driving ranges and putt-putt courses typically provide golf clubs and putters for the players to use. However, when it comes time to actually play the game many beginners do not own their own clubs so they must borrow, rent or buy a set just to get out and see if the game is something that interests them. Once on the course, many beginners are intimidated by the prospects of embarrassment from poor ball striking or exposing their limited athletic abilities in front of onlookers. A bad experience or two may drive them away from the game permanently, which would deprive those individuals of the many benefits afforded by golf. Being outside, sharing experiences, developing and enhancing friendships, competing against oneself and others and having fun are examples of golf's benefits that can improve an individual's quality of life at any age.

[004] Further, traditional golf may consume a relatively large amount of time to complete play, such as playing 18 holes. This is due in part to the distance between tees and greens, looking for lost balls, enforcing rules of play, the distance between errant shots and players taking too much time to prepare for and executing a shot. Many potential players avoid traditional golf as a form of recreation due to the amount of time it takes to play.

[005] In view of the above, it would be advantageous to provide a method for laying out a course that is cost effective and requires maintenance on a limited amount of land. The course may be designed for playing a recreational and/or competitive game suitable for players of any age and ability, which is not prohibitively time consuming.

BRIEF SUMMARY OF THE INVENTION

[006] Exemplary embodiments of the invention allow for the cost effective design, construction and maintenance of a course that minimizes land use and affords players an opportunity to play a game, which may include characteristics of the traditional game of golf. One aspect of the present invention allows for each course to be unique but contain the same operational elements and/or common attributes as other courses. This approach reduces land and natural resource requirements, which allows for courses to be constructed virtually anywhere in the world. An exemplary course requires approximately thirty acres of land. Another aspect of the invention allows for a customized sports cube to accompany the course, which may incorporate additional sports facilities and/or recreational amenities. Minimizing the land use requirements expands the range of locations that would otherwise be considered inadequate for some recreational facilities. For example, they may be located closer to major traffic arteries and commerce centers where traditional golf courses could not be located.

[007] One aspect allows for designing a course by selecting a set of 9 or 18 individual holes where each hole may include a set of common features and/or operational elements within a corridor. The natural features of a parcel of land for constructing the course may be a factor in selecting individual holes, particular features and/or the manner in which they are arranged. Other factors may include the total area of land available and the route a player may take when playing the course. The common features and/or operational elements for a hole may be pre-designed so that an end user may select from groups of features and/or elements for each hole.

[008] One embodiment provides a group of practice putting greens, a group of playing greens and a group of fairways as the common features from which an end user may select to design a hole. Each fairway may include a set of operational elements, such as a layout of piping for irrigation and a configuration of light sources for night play. Providing groups of common features and/or operational elements allows for flexibility in designing a course, meeting an end user's needs and ease of construction.

BRIEF DESCRIPTION OF THE DRAWINGS

- [009] FIG. 1 is a plan view of an exemplary embodiment of a course layout.
- [010] FIG. 1a is an illustration of the course layout of FIG. 1 showing exemplary playing routes.
- [011] FIG. 2 illustrates a plan view of a pair of exemplary embodiments of course holes without a playing green.
- [012] FIG. 3 is a plan view of an exemplary embodiment of an irrigation layout.
- [013] FIG. 4 is a plan view of an exemplary embodiment of a practice putting green.
- [014] FIGS. 5-7 illustrate plan views of exemplary embodiments of playing greens of the course.
- [015] FIG. 8 is a plan view of an exemplary embodiment of a sports cube layout.
- [016] FIG. 9 is a plan view of an exemplary embodiment of a course layout and sports cube forming an exemplary recreational facility.
- [017] FIG. 10 is a plan view of an exemplary lighting configuration.
- [018] FIG. 11 illustrates an exemplary chart associating yardage designations with levels of competence.
- [019] FIG. 12 illustrates exemplary aspects of a scoring system in accordance with aspects of the invention.
- [020] FIG. 13 illustrates an exemplary scorecard that may be used during play of a game over a course layout of FIG. 1.
- [021] FIG. 14 illustrates an exemplary competitive rating system for players.

DETAILED DESCRIPTION OF THE INVENTION

- [022] FIG. 1 illustrates an exemplary embodiment of a course layout 10 in accordance with various aspects of the invention that may include a plurality of

individual holes 12 arranged to form a course layout such as course layout 10. One aspect allows for 18 holes to be arranged in an embodiment, as shown in FIG. 1, to form a grid having two columns with eight holes 12 in each column for a total of sixteen holes 12. Respective holes 12 in a column may have substantially parallel longitudinal or lengthwise axes so that the two-column portion of course layout 10 is substantially rectangular. It will be appreciated that holes 12 may be configured in other combinations to form grids having varying numbers of holes 12 in each column and row. For example, another embodiment may form a 4 X 4 matrix or grid where there are four holes 12 in each column and each row. Further exemplary embodiments will be recognized by those skilled in the art and may include, for example, a course layout 10 comprising a single column having a plurality of holes 12 or a single row having a plurality of holes 12.

[023] One aspect as shown in FIG. 1 allows for two holes 12 to be arranged proximate a column of holes 12 to form a course layout 10 constituted of 18 holes 12. In this respect, the two holes 12 proximate the column of holes 12 may have a respective longitudinal axis substantially perpendicular to a longitudinal axis of a hole 12 within a column. The exemplary embodiment of course layout 10 in FIG. 1 allows for play of a game along respective playing routes, illustrated in FIG. 1a, over respective 9-hole layouts. FIG. 1a illustrates course layout 10 of FIG. 1 and illustrates a first playing route 11 and a second playing route 13 for playing a game, such as a method of play disclosed herein. A playing route 11, 13 may be played once as a 9-hole game, twice as an 18-hole game or routes 11, 13 may be played consecutively for an 18-hole game. Playing routes 11, 13 illustrate the general direction of play over a course layout of 9-holes 12. More specific course-playing routes may be used for playing a game over individual holes 12 as described below. Alternate embodiments allow for similar playing routes for playing games over a course layout having more or less than 18 holes.

[024] One exemplary embodiment of course layout 10 allows for support facilities such as a parking area 14, a Distance Testing Grid ("DTG") 16, a

clubhouse 18, a practice putting green 20 and driving range 22 to be constructed between the two vertically oriented holes 12 as illustrated in FIG. 1. Alternate embodiments allow for an additional hole 12, a “nineteenth hole”, to be constructed between the vertically oriented holes 12. For example, frequently a game may end in a tie, in which case the “nineteenth hole” may be used to determine a winner as in a playoff. An exemplary embodiment allows for course layout 10 to be contained within approximately 30 acres where the parking area 14 occupies about 0.81 acres, a maintenance area 23 about 0.7 acres, clubhouse 18 about 0.09 acres, practice putting green 20 about 0.07 acres and driving range 22 about 0.14 acres. Alternate embodiments allow for the sizes of holes 12 and/or the support facilities to vary depending on end user needs or land constraints, for example. A grandstand such as conventional bench seating may be located proximate a finishing portion of a hole 12, such as near a putting green described below. A plurality of manikins may be located within the grandstand and means for playing a recording of applause and cheers may be used as a special effect on a hole 12.

[025] FIG. 2 illustrates a pair of holes 12 where each hole 12 may be defined by a border or corridor 26 that may have a substantially rectangular shape and in an embodiment defines an area of approximately 1.54 acres. An individual hole 12 may be defined as that area contained within corridor 26. One aspect of the invention allows for a corridor 26 to include a variety of common features and operational elements. For example, a corridor 26 may include a playing green area 30 for placement of a playing green as described below. A corridor 26 may include a fairway 32, a hazard area or sand bunker 34, a border 36 that may define the limits of a playing surface, a non-irrigated natural area 38 and mounded areas 40, for example. A corridor 26 may include a first or short tee box 50, a second or medium tee box 52 and a third or long tee box 54. As described below, respective tee boxes 50, 52, 54 of each hole 12 may have a color associated therewith for defining respective layouts within course layout 10 over which a game may be played in accordance with aspects of the invention.

[026] FIG. 3 illustrates an exemplary hole 12 within a corridor 26. Hole 12 may include common features and/or operational elements that allow for minimizing land use, reducing design time and the cost effective construction of and reduced maintenance costs relating to course layout 10. One common operational element may be piping 72a, 72b, 76 that define a routing layout of an irrigation system for hole 12. A pump station 60 may be provided for pumping water from a pond 62, via an inlet pipe 77, through a feed pipe 75, appropriate piping 72a, 72b, 76 and respective valves (not shown) to sprinkler heads 74 for irrigating portions of the hole 12. For example, tee boxes 64 and 66, fairway 68 and green 70 may be irrigated through piping 72a, 72b and sprinkler heads 74. Piping 76 may be configured with suitable valves to direct water from pump station 60 to piping 72a, 72b and/or to other holes 12 of the course layout 10. Pump station 60 and respective valving may be controlled by a field satellite controller 79.

[027] In an exemplary embodiment of an irrigation layout shown in FIG. 3, piping 72a may be substantially linear and 72b may be nonlinear. Piping 72a, 72b may be substantially parallel to one another, along their respective lengths, within a corridor 26 and each may include a predetermined number of sprinkler heads 74 connected thereto. In an embodiment, six sprinkler heads 74 may be spaced approximately the same distances apart along each piping 72a, 72b to irrigate any natural and/or grass areas of a hole 12, regardless of the direction of play of the hole. Providing an irrigation layout having predetermined sizes and configurations of piping 72a, 72b allows for the layout to be installed within any corridor 26 defining a course layout such as course layout 10. Similarly, providing pump station 60, piping 75, 76, 77 and controller 79 with predetermined specifications allows for them to be installed within any necessary corridor 26 to achieve the irrigation requirements of course layout 10. Providing these operational elements having predetermined specifications allows for cost effective and timely construction of course layout 10.

[028] One aspect of configuring a plurality of holes 12 for a course layout 10 includes selecting a pair of adjacent or opposing holes 12 that are shaped to

form a portion there between that may be shaped and sized for placement of a pond such as irrigation pond 62. Referring to FIG. 1, pond 62 may be positioned between a first hole 12a and a second hole 12b, for example, each of which may have a somewhat arcuate or dogleg shape. Selecting a pair of adjacent or opposing holes 12 in this manner is advantageous in that it ensures sufficient availability of land for location of pond 62 and proper irrigation of the course layout 10. Locating pond 62 between holes 12a and 12b allows for the holes to be contained within their respective corridor 26.

[029] FIG. 4 shows an exemplary embodiment of a practice putting area 80 that may include a putting green 82, a set of mounded areas 84 and a chipping area 86. Putting green 82 may be provided with predetermined features such as surface contours and size, for example, and may be pre-designed to fit within the putting green area 20 of FIG. 1. Area 20 may be sized to receive putting green 82 alone or in combination with other elements of putting area 80. One aspect of the invention allows for a plurality of putting areas 80 to be provided having predetermined or pre-designed features such as a plurality of respective contours and sizes for selection by an end user. Pre-designed putting areas 80 may include corresponding putting greens 82 that may be sized to fit within the putting green area 20. This allows an end user to select one putting area 80 from the plurality of putting area configurations best adapted for that end user's needs. One exemplary embodiment allows for eight distinct pre-designed and sized putting areas 80 where the area of associated putting green 82 is approximately 3,000 square feet. Alternate embodiments allow for the number, shape and/or size of putting areas 82 to vary as a function of end user needs, land use restrictions and/or site topography, for example.

[030] FIG. 5 illustrates an exemplary embodiment of a playing area 90 that may include a putting green 92, a set of mounded areas 94, hazards or sand bunkers 96, an approach area 98 and a chipping area 100. FIG. 6 illustrates another exemplary embodiment of a playing area 110 that may include a putting green 112, a set of mounded areas 114, hazards or sand bunkers 116, an approach area 118 and a chipping area 120. Similarly, FIG. 7 illustrates another

exemplary embodiment of a playing area 130 that may include a putting green 132, a set of mounded areas 134, hazards or sand bunkers 136, an approach area 138 and a chipping area 140. Each playing area 90, 110 and 130 may be pre-designed for ease of selection by an end user and various portions of these areas may be sized to fit within a putting green area 30 best shown in FIG. 2.

[031] In this respect, one aspect of the invention allows for respective putting greens 92, 112, 132 and respective hazards 96, 116, 136 of respective playing areas 90, 110, 130 to be sized for placement within a corresponding putting green area 30. By way of example, with respect to playing area 90, putting green 92 and hazard 92 may fit within putting green area 30, and corresponding mounded area 94, approach area 98 and chipping area 100 may fit at least partially within putting green area 30, or not at all. One aspect allows for playing area 90 to be pre-designed so that putting green 92 and hazard 96 fit within the playing green area 30 with only a portion of mounded area 94, approach area 98 and chipping area 100 fitting within putting green area 30. This allows for the remaining portions (outside putting green area 30) of mounded area 94, approach area 98 and chipping area 100 to be sized and shaped substantially the same as those same areas of another playing area, such as playing area 110, for example. As such, those portions of mounded area 94, approach area 98 and chipping area 100 outside of putting green area 30 may be the same or substantially the same among any combination of holes 12 making up a layout such as layout 10. This allows for any hole 12 to be pre-designed and/or constructed to receive any playing area such as playing areas 90, 110, 130 wherein those portions of areas 94, 98 and 100 outside of a putting green area 30 will conform with their corresponding portions contained within the area 30.

[032] One aspect allows for a plurality of playing areas, such as 90, 110, 130, to be pre-designed so that an end user may select a playing area from the plurality of playing areas for each hole 12. An exemplary embodiment may provide 54 distinct pre-designed and sized playing areas where the respective putting greens or surfaces may each range between approximately 2,000 and

3,000 square feet. Alternate embodiments allow for the size of the putting greens 92, 115, 132 to vary provided that the overall size of the respective playing greens 90, 110 and 130 fits within a playing green area 30. An exemplary embodiment allows for selecting a playing green from groups having about a 2,000, 2,500 or 3,000 square foot putting surface, it being appreciated that other square footages may be used.

[033] One aspect of configuring a plurality of holes 12 for course layout 10 may include selecting a playing area, such as one of the playing areas 90, 110 and 130, for a hole 12 so that the respective putting green 92, 112, 132 is best positioned for receiving shots from a respective fairway and/or tee box. FIG. 2 illustrates exemplary respective routes 150, 152 and 154 a player may like to take when striking an object and moving it from a respective tee box 50, 52 or 54 to an exemplary playing area and associated putting green in a playing green area 30. As illustrated by routes 150, 152, 154, an approach shot directed toward a playing area within playing green area 30 along one of these routes would come into the green at substantially different angles from the fairway. An end user laying out course 10 may select a respective playing area that is most appropriate to accommodate receipt of shots coming in at these angles.

[034] As can be seen in FIGS. 5-7, respective putting greens 92, 112 and 132 of playing areas 90, 110 and 130 may be oriented at different angles with respect to their associated fairways when placed within a playing green area 30. This allows for selecting a respective putting green 92, 112 and 132 that best accommodates the angle at which shots are played to the associated putting green. Another aspect allows for putting greens 92, 112 and 132 to be sloped, such as from back to front so the putting green is tilted toward a fairway, to help prevent an object from hitting the surface of the putting green and bounding off the back of the putting green. Respective putting green surfaces may also be contoured to facilitate movement of an object, such as a ball, toward a particular part of the putting surface, for example, or inhibiting an object from being propelled off the putting green on impact. Pre-designing the putting greens and surfaces with these or other characteristics allow for an end used to adjust the

difficulty of each hole 12 when configuring a course layout such as course layout 10. This may be advantageous to an end user because local demographics may indicate that individuals likely to play a course layout 10 would prefer to have the course play at a desired level of difficulty whether it be easy, hard or somewhere in between. Configuring or laying out course 10 to meet the needs of potential players is an important aspect to ensure the long-term economic viability of a course layout 10.

[035] FIG. 8 illustrates an exemplary embodiment of a sports cube 160 that may be constructed alone or in combination with a course layout 10. One aspect allows for sports cube 160 to include a plurality of sports fields and/or activity stations such as a set of softball fields 162, a set of soccer fields 164, a set of volleyball courts 166, a play area 168, a swimming pool 170, a recreation center and/or concessions area 171 and a batting cage 172, for example. A parking area 174 and a set of walking or jogging paths 176 may also be provided. An exemplary embodiment of a course layout 10 and sports cube 160 may be combined into a recreational facility 180 that requires a total land area of about 50 acres as shown in FIG. 9. It will be appreciated that various embodiments of recreational facility 180 may occupy a range of land areas.

[036] One aspect of the invention provides pre-designed groups of practice putting greens, playing areas and holes from which an end user may select to layout a course 10. An exemplary embodiment may provide a group of eight putting greens, a group of 54 playing areas and a group of 48 holes. Each of the putting greens, playing areas and holes may include different designs, configurations, contours or aspects of common features and/or operational elements so that a course layout 10 may be customized to an end user's needs. Providing pre-designed putting greens, playing areas and holes along with providing pre-designed pond locations and sizes, landscaping features, irrigation and lighting configurations and various embodiments of sports cube 160 allow for cost effective and timely construction of a recreational facility 180.

[037] An exemplary embodiment of the invention allows for 48 pre-designed holes 12 to be presented to an end user as a set of 24 pairs of holes 12

that may be substantially mirror images of each other. For example, FIG. 2 illustrates one pair of such exemplary holes 12. Providing 24 pairs of mirror image holes 12 is advantageous in that an end user has flexibility for designing a course layout 10 to accommodate specific needs. This also allows for cost effective design and construction. For example, the topographical features of an end user's site may demand that a course layout 10 be routed in a limited number of directions or in a specific direction. The 24 pairs of mirror imaged holes provide a sufficient range of choices to accommodate an end user's needs for configuring the course layout 10 without having to incur the costs of designing and constructing new holes to meet specific topographical features. The 24 pairs of holes 12 allows an end user to select a combination of holes 12 that will produce a desired route or routes for players to follow while playing 9 or 18 holes, for example. Routes may also be created to allow players to conveniently play a number of holes other than 9 or 18 such as for playoff purposes or to get back to the clubhouse 18 before dark or rain. It will be appreciated that some or all holes 12 may be pre-designed that are not mirror images of each other.

[038] One aspect allows for a predetermined subgroup of playing areas, such as areas 90, 110, 130, and/or putting greens, such as greens 82, 92, 112, to have a predetermined association with at least one of a short tee, a medium tee and a long tee for a respective hole 12. This association may be a function of the direction of approach shot portions of routes 150, 152, 154, shown in FIG. 2, and their respective relationships with a playing area and/or putting green. One aspect allows for the association to be a function of the putting green's position, such as its position within a respective playing area. As discussed above, it may be desirable to have the putting green positioned relative to the approach shot portion of a route 150, 152, 154 so that an object, such as a ball, striking the putting green is not likely to bounce off the side or back of that green. Another aspect allows for putting greens to be associated with a hole 12 based on the putting green's size and/or contours. These predetermined associations allow an end user to select a hole 12 then determine an appropriate playing area and/or putting green to be used with the selected hole 12. Alternatively, a playing area

and/or putting green may be selected first then a hole 12 may be selected based on the predetermined associations. This allows for configuring a course layout 10 that meets the end user's specifications.

[039] FIG. 2 illustrates a short tee box 50, a medium tee box 52 and a long tee box 54. An exemplary embodiment allows for a first subgroup of putting greens to have a predetermined association with short tee box 50, a second subgroup to have a predetermined association with medium tee box 52 and a third subgroup to have a predetermined association with long tee box 54 for a respective hole 12. The respective tee boxes 50, 52, 54 of each hole 12 of a course layout 10 may have predetermined associations with first, second and third subgroups of playing areas and/or putting greens. It will be appreciated that a varying number of putting greens may be within each subgroup and a putting green may be in more than one subgroup per hole 12. In one aspect an end user may select a hole 12 then select an associated playing area and/or putting green from a lookup table that associates the subgroups of playing areas and/or putting greens with the selected hole 12.

[040] FIG. 10 illustrates an exemplary embodiment of a predetermined lighting configuration 190 for a hole 12. Configuration 190 may include a plurality of illumination sources such as sources 192, 194, 196, 198, 200, 202. These sources may be positioned at various predetermined locations with respect to one or more corridors 26 and in an embodiment one source 192 may be located for illuminating play on one or more holes 12. Sources 192, 194, 196, 198, 200, 202 may be positioned to ensure their illumination is aimed down a line-of-play and away from a player's eyes. Various embodiments allow for the predetermined lighting layout 190 to illuminate one or more holes 12 of a course layout such as course layout 10.

[041] One exemplary embodiment allows for a method of playing a game on course layout 10 using an exemplary scoring system disclosed herein. Embodiments of the game may be played using equipment disclosed in U.S. Patent No. 6,217,458 issued to Armstrong, et al., for example, which is specifically incorporated herein by reference. It will be appreciated that a game

may typically be played over 9 or 18 sequential holes 12 of course layout 10. With reference to FIG. 1a, a game may be played along a course-playing route 11, 13 for a 9-hole game or over both routes for an 18-hole game. In this respect, an 18-hole layout may include a first or "front" 9-hole layout, such as course-playing route 11, and a second or "back" 9-hole layout such as course-playing route 13.

[042] In one aspect a game may be played on a playing route of an individual hole 12 or over a course playing route 11, 13, for example, comprising at least two holes 12 of course layout 10. In this respect, each tee box 50, 52, 54 of a respective hole 12 may be color-coded to define a plurality of exemplary playing routes 50a, 52a, 54a, shown in FIG.1, from the tee boxes to a respective putting green 55. Each hole 12 may include one or more tee boxes 50, 52, 54 of different colors defining different playing routes. A first tee box 50, 52 or 54 of a respective hole 12 may be color-coded red, a second tee box 50, 52 or 54 yellow and a third tee box 50, 52 or 54 blue to define exemplary red, yellow and blue playing routes for the respective hole 12.

[043] A plurality of holes 12, such as 9 sequential holes 12 shown in FIG. 1a, may have respective tee boxes 50, 52, 54 color-coded red, yellow and blue to define three distinct playing routes over course playing routes 11, 13. An exemplary playing route may be played over a course playing route 11, 13 by beginning play on each hole 12 from the same color-coded tee box of each respective hole 12 along the course playing route 11, 13. For instance, an exemplary 9-hole playing route may be played over course playing route 11 by beginning play on each on the 9 holes 12 from their respective red tee boxes, which may be referred to as the red course-playing route. Beginning play on each of the 9 holes 12 from their respective yellow or blue tee boxes may be referred to as the yellow and blue course-playing routes, respectively. A red, yellow and/or blue playing route may be defined on individual holes 12 and/or over a plurality of holes 12 such as the 18 holes defining playing routes 11, 13, for example, when played consecutively. It will be appreciated that numerous combinations of short, medium and long tee boxes, and holes 12 may define a

course-playing route. For example, each 9-hole course-playing route 11, 13 may include 2 short tee boxes, 2 long tee boxes and 5 medium tee boxes where each respective tee box is color-coded the same.

[044] In one aspect of the invention, a game may be played on the red, yellow or blue course-playing routes of an individual hole 12 or over any combination of holes 12, such as each set of 9 holes defining course-playing routes 11, 13, or the 18 holes of course-playing routes 11, 13 when played consecutively. A player may use playing equipment, such as the exemplary equipment disclosed in U.S. Patent No. 6,217,458 to play the game. An exemplary 9-hole game may be played over course-playing route 11 by beginning play on each hole 12 of that route on their respective red tee boxes. A player may tee-up a ball on the red tee box of a hole 12 and use a club to propel the ball from the tee box to the respective putting green of that hole 12. The player may count the number of times the player hits the ball to propel the ball from the tee box to a three-dimensional target positioned on that hole's putting green. Each hit may equal one point so the player may count the hits to determine the number of points for that hole. The player may follow this procedure for each hole 12 of course-playing route 11 then sum their points for each of the respective 9 holes to determine their actual point score for the red course-playing route of course-playing route 11.

[045] One aspect of a scoring system disclosed herein allows for a player to earn a Distance Assessment Level ("DAL"), such as the Distance Assessment Levels 1 through 5, for example, as shown in FIG. 11. A player's DAL is determined based on the distance the player can hit a ball using a club such as those disclosed in U.S. Patent No. 6,217,458. In this respect, players may be categorized for competitive play based on distances they hit a ball rather than on historical scores. A Target Score ("TS") may be determined for each hole 12 and any course-playing route. An architect or designer, for example, of course layout 10 may determine a TS for each of three color-coded courses that could be played using combinations of the three color-coded tee boxes 50, 52 and 54 of respective holes 12. For example, a TS may be determined or assigned to the

respective red, yellow and blue 9-hole course-playing routes of respective course-playing routes 11, 13. Similarly, a TS may be determined for each of the respective red, yellow and blue 18-hole course-playing routes by summing the respective TS determined for each of the 9-hole red, yellow and blue course-playing routes.

[046] In one aspect, a TS may be determined for each of five Levels 1 through 5, as shown in FIG. 12, for each of the 9 and 18-hole red, yellow and blue course-playing routes (Red, Yellow and Blue Course). The TS Levels 1 through 5 may be associated with Levels 1 through 5 of the DAL. In this respect, a player having a Level 1 DAL may use the respective Level 1 Target Scores when playing a respective Red, Yellow and/or Blue Course as illustrated in FIG. 12. It will be appreciated that a TS may be determined for any number of holes 12 designated for playing a game.

[047] In one aspect a player may determine or earn their DAL by hitting 10 full swing shots with respective equipment disclosed in U.S. Patent No. 6,217,458. A player's DAL may be determined daily, such as immediately before playing a round, or over other periods. The shots may be executed on Distance Testing Grid 16 shown in FIG. 1. The average distance of the 10 shots may be calculated to determine that player's personal DAL, which may be one of the Levels 1 through 5 of FIG. 11. A DAL card may be assigned to the player, which may be signed by a professional and returned to the player. The player's DAL and other information, such as personal data, may be entered into a local database for later computational analysis. In one aspect, if the weather conditions are too adverse, for example, that a player's DAL is not accurately assessed, a professional may assign that player a temporary DAL for a particular day based on that professional's judgment.

[048] One aspect allows for each Distance Assessment Level 1 through 5 to be assigned a yardage designation or range, as shown in FIG. 11. It will be appreciated that the yardage ranges shown in FIG. 11 may vary depending on the type of ball and club used for determining a player's DAL. If balls and/or clubs are used that are harder or softer relative to those disclosed in U.S. Patent

No. 6,217,458 then the yardage ranges of FIG. 11 may be adjusted to account for the differences in distance such balls will travel. In one aspect, a calibration factor may be used for associating a player's DAL with a TS. An exemplary calibration factor of 80% may be used with determine a player's Distance Factor ("DF"). In this respect, the calibration factor may be multiplied by a player's 10 shot average to determine that player's DF. For example, if a player's 10 shot average is 65 yards then 52 yards ($80\% \times 65$) may be that player's DF for associating that player with a TS. This DF (52 yards) falls into Distance Assessment Level 1 i.e., 52 yards is between the 55-65 yard designated range of Level 1, shown in FIG. 11. That player may then use by association the Level 1 TS shown in FIG. 12 when playing a game in accordance with aspects of the invention. Each Distance Assessment Level may have the same or different calibration factors, or none at all. Any player having a DF greater than 65 yards may be categorized in Distance Assessment Level 1 and less than 25 yards in Distance Assessment Level 5.

[049] In one aspect, a Daily Target Score ("DTS") may be determined for each of the five Levels associated with a course-playing route by calculating a Climatic Difficulty Factor ("CDF") and adding it to the respective TS for a course-playing route. The CDF may be calculated as a function of daily wind speed and direction, temperature, precipitation, course conditions and other daily parameters that may affect play of the game. The course architect or designer may determine the CDF values and issue guidelines regarding their use in adjusting the DTS. A Target Score Certificate may be issued to indicate the values assigned to each Level of the DAL and the CDF values. This certificate may validate the course layout 10 as an official course for playing a game in accordance with one aspect of the invention.

[050] An exemplary Target Scoreboard may be posted in various places such as the clubhouse 18 and on at least two of the three tee boxes 50, 52 and 54, such as a 1st tee box and a 10th tee box. The DTS may be determined by a course 10 professional and posted on the Target Scoreboard. The professional may also determine the CDF for each day and at any time during the day. The

CDF may change at any time during play of a course layout 10. One aspect allows for 10 predetermined CDF Levels to be used and the professional may determine which Level is in effect, if any, at any point in time. The CDF in effect may be posted prior to play of a round and may be used to adjust the DTS. The 10 Levels of the CDF may be numerical and added or subtracted from the TS to determine the DTS. FIG. 12 illustrates exemplary TS within different Levels for a “front” 9-hole course-playing route (A), a “back” 9-hole course-playing route (B) and a respective 18-hole course-playing route (18) for each of a Red, Yellow and Blue Course of course layout 10. FIG. 12 also illustrates a CDF of 0, for example, and DTS within each Level for the respective Red, Yellow and Blue Courses.

[051] A player may earn a Competitive Rating (“CR”) such as after 10 rounds of play over a course-playing route on a course layout 10, which may be used in tournament play. A player’s CR may be determined in other ways such as by using the player’s 10 best scores from their last 20, for example. A player’s CR may alternatively be computed at the beginning of each month using that player’s most recent 10 scores. A player may then move from one CR Level to another or between CR Classes in a CR Level based on the average Differential for the new monthly period. As shown in FIG. 14, Class Differential Ranges may be used in association with the Competitive Ratings. A player’s CR may be defined by Levels 1 through 5 and Classes A through E within each Level. Each Class within a Level may be defined by a range of Differential values, discussed below, as shown in FIG. 14. A player’s CR may be determined by summing the players’ Differentials for each of 10 rounds then dividing that number by the number of rounds, which in this example is 10. The player may be assigned a CR Class based on this Differential average.

[052] By way of example, if a player’s 10 round average Differential equals 7.15 then that player will be assigned CR Class C, which has a range of 06.01-10.00. That player may also be assigned a CR Level based on a Target Score used by that player for playing a round. In this respect, as discussed above, a player may determine their respective TS based on that player’s

Distance Assessment Level. If a player's respective TS is in Level 3 (DTS of 75.10) of the Target Scores shown in FIG. 12, and has an average Differential of 7.15, then that player may be assigned a CR of Level 3, Class C. One aspect allows for establishing Tournament Divisions that include players that fall into CR Classes A-E within CR Levels 1-5. This allows for grouping players of differing playing abilities into the same Divisions for competitive play.

[053] An exemplary Scorecard, illustrated in FIG. 13, may be used when playing a game in accordance with aspects of the invention. A player may fill out several areas of the Scorecard prior to and/or after a round being played over a course layout 10. The exemplary Scorecard of FIG. 13 illustrates various types of recorded information. Players' names may be entered in boxes 200. A player may designate in boxes 202 which set of tee boxes 50, 52 or 54 are being used for playing a game. This may be done by indicating the color-coding (Red, Yellow or Blue) of the respective course-playing route being played, for example. In this respect, a surface area of one or more tee boxes 50, 52, 54 may be partially or completely covered with an artificial or synthetic turf fabricated in a respective color. For example, tee box 50 of a hole 12 may be covered in red, tee box 52 covered in yellow and tee box 54 covered in blue. Partially or completely covering each tee box 50, 52, 54 in this manner provides visibly distinct course-playing routes for players so they may easily identify which tee box 50, 52, 54 to use on the next hole 12 when playing a course-playing route. In one aspect, the holes 12 of a course layout 10 may include various synthetic surfaces and in an embodiment at least the respective surfaces of tee boxes 50, 52, 54 and respective putting surfaces may be synthetic. Other embodiments allow for holes 12 to be constructed of various combinations of natural and synthetic surfaces.

[054] Returning to FIG. 13, each players' DAL may be entered in boxes 204 and each players' CR (Class A-E) may be entered in boxes 206 of the exemplary Scorecard shown in FIG. 13. The players' scores for each hole may be entered in the appropriate boxes in rows 208 indicating their respective scores for a first 9-hole course-playing route (A) and a second 9-hole course-playing

route (B) of a course layout 10. The players' total score for the combined 9-hole course-playing routes may be entered in boxes 210. The respective TS for the 9-hole routes A and B, and the DTS for the combined 9-hole routes may be entered in boxes 212. In one aspect, a player may play a course-playing route and determine their actual score, or points, for that route by adding the individual points for each hole, such as the 18-hole total (A + B). The player's actual 18-hole score may be subtracted from the respective DTS of the played course-playing route to determine a plus or minus differential. Each player may calculate their respective Differential, which expresses the relationship between a player's actual point score and the DTS and may be positive, negative or zero. A player's actual score of 62 may be subtracted from the DTS of 64.84 to yield a -2.84 as shown in box 214.

[055] While the exemplary embodiments of the present invention have been shown and described by way of example only, numerous variations, changes and substitutions will occur to those of skill in the art without departing from the invention herein. Accordingly, it is intended that the invention be limited only by the spirit and scope of the appended claims.